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Welcome

Port and Corridor Trade Delegation

Wed November 27, 2013

Content

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Clusters

Port of Rotterdam
Vision 2030

Dutch Maritime
Cluster

Simulation

Technical assistance
and research

Post-graduates

Joint Ventures/
Branch offices

(Port) statistics

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How it started ...

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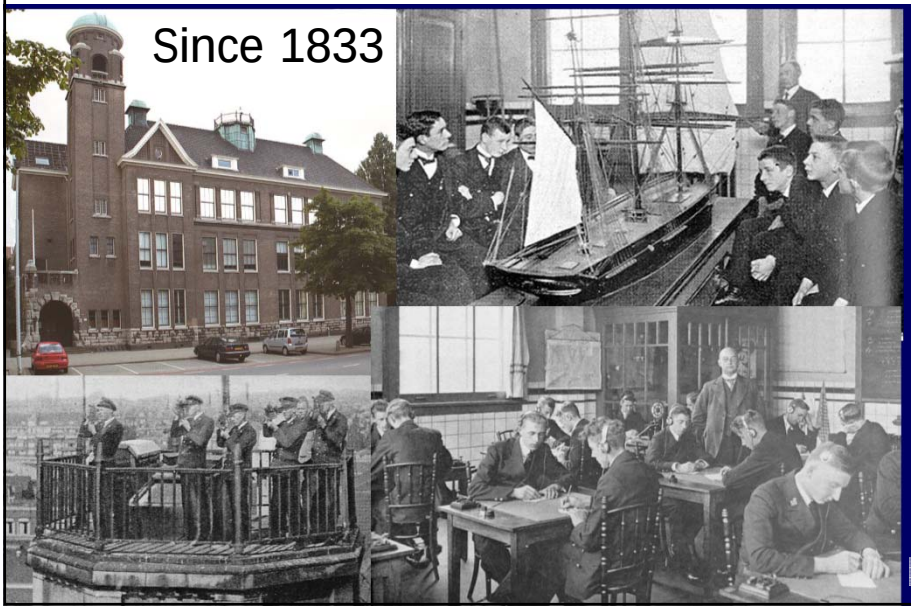

Introduction STC-Group

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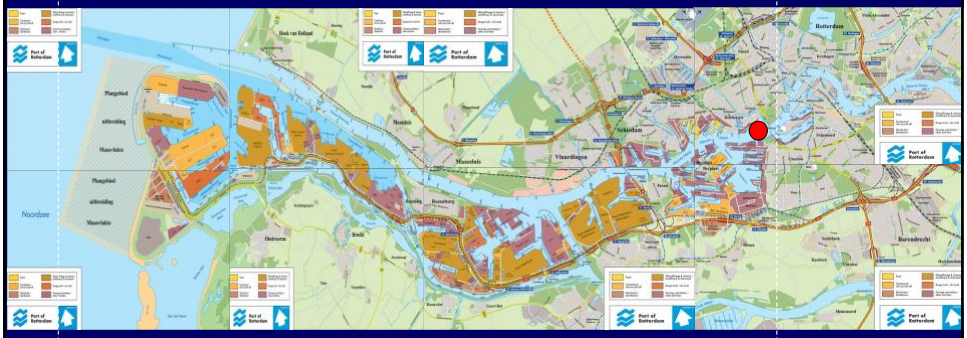
Maasvlakte (1970/2011) | Europoort (1958) | Botlek (1947) | City Centre (untill 1872)



Approx 45 km

Location

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Education, Training, Technical Assistance and Research

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STC-Group industry vs training levels

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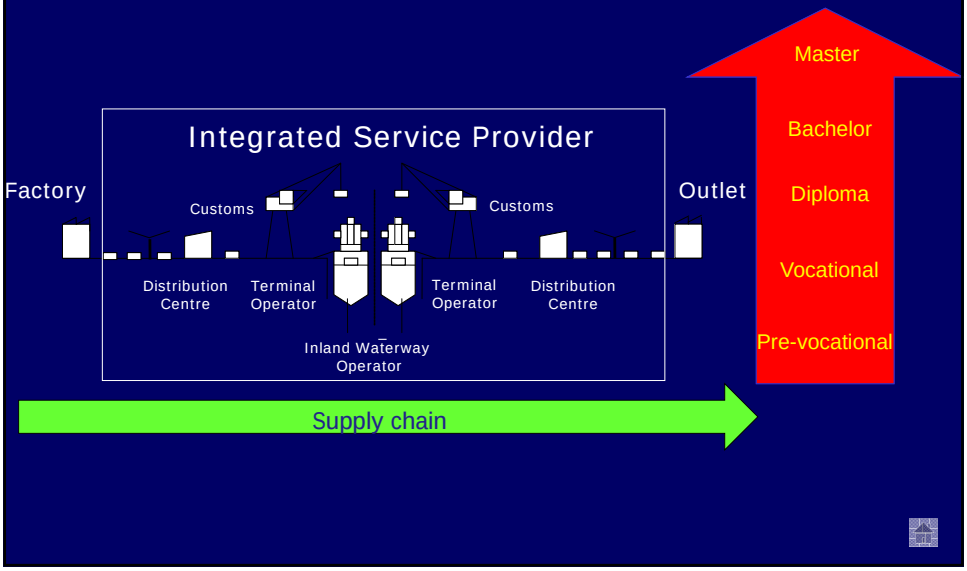
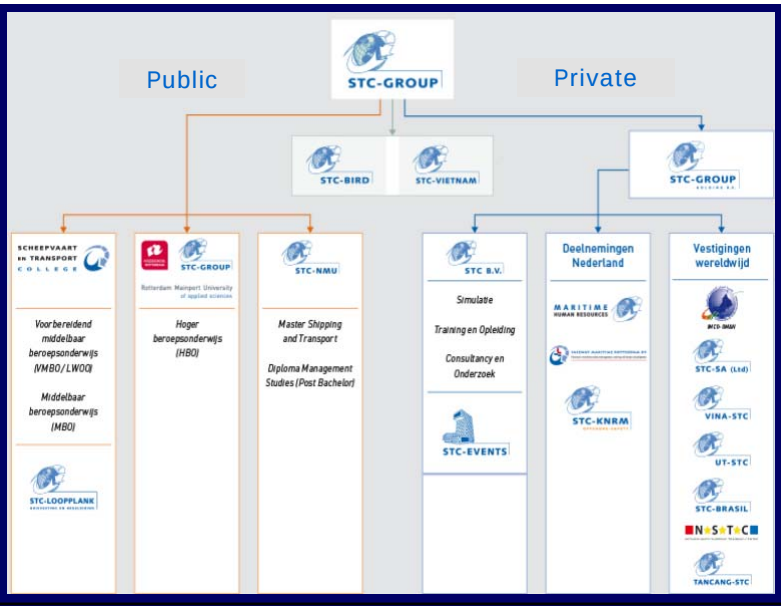
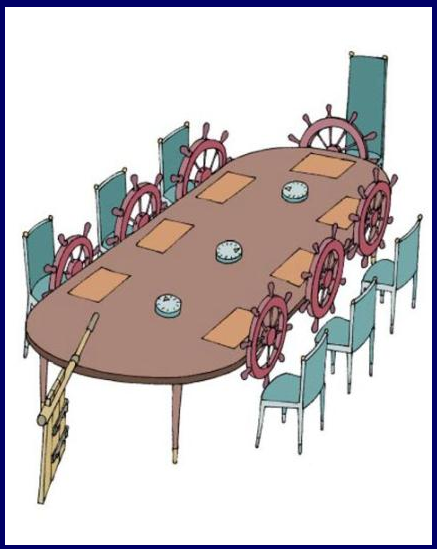


STC-Group – non-profit foundation



Board of Governors; members from Associations

- KVNR (Ship Owners)
- VBKO (Dredging Contractors)
- Deltalinqs (Port Operators)
- VNSI (Ship Yards)
- Sea Fisheries Association
- FWZ (Seafarers' Union)



Board of Advisors; members from industry

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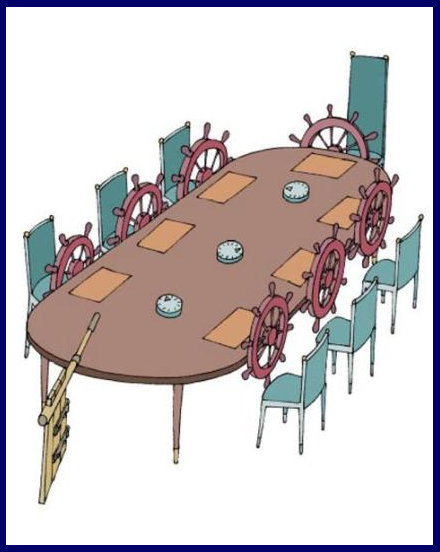
- Damen Shipyard
- Van Oord
- Deltalinqs
- Nautilus International
- Mooy Logistics B.V.
- Huntsman Holland B.V.
- United Fish Auctions
- Van den Herik Sliedrecht



Industry Steering Committees

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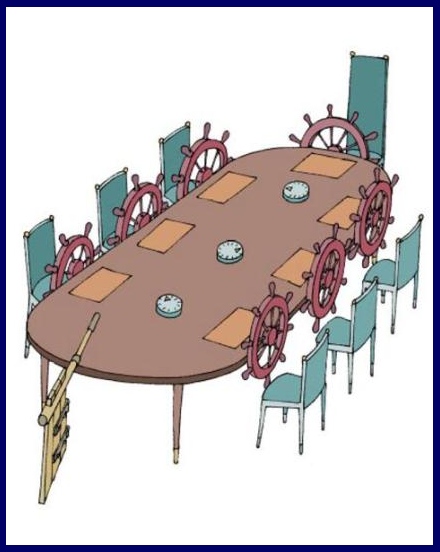
Advising about content, developments and need for education and training in the relevant industries.

Representing industries:
- Ports
- Air transport
- Road transport
- Logistics
- Rail transport
- Inland navigation
- Shipbuilding
- Dredging
- Sea shipping
- Sea fisheries
- Process industries



Education model

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Motto

To hear is to forget

To see is to remember

To do is to understand

Why

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Prior to organising transport and handling cargo, **professionals** must have obtained **knowledge, understanding** and **skills** from the **best** institute serving the **maritime and transport (related) industries**.

How

- **Lecturers and instructors**
  - Professionals from the industry, for (future) industry professionals
- **Course material**
- **Execution**
  - On-the-job, in the regio or with an STC Centre of Excellence anywhere in the world
- **Services**
  - Standard and tailor-made
- **Infrastructure**
  - Modern and smart learning environments
  - Simulators
  - Vocational training centres

How

How

How

What

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- (Simulated assisted) **education** and **training**
  - Centres of Excellence; Management assistance, training course for instructors; Refresher courses; Course development
- **Technical assistance**
  - IMO Whitelisting; Policy advice vocational education; Port and terminal operations upgrade; Staff development programs; Recruitment, assessment, selection
- **Innovation** and (applied) **research**

What

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Key issues in the services provided

- Competency
- Rules and regulations
- Efficiency
- Safety and security
- Environment

Standards of port related training

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One world standard for port and terminal operational training does not exist.

Wide variety of standards like:

- Seafarers: STCW (IMO)
- Dock workers: PDP (ILO)
- Crane drivers: OSHA (USA), LOLER (UK)
- Offshore: NOGEPA, OPITO

STC combines and uses all relevant standards plus best practices

Clusters

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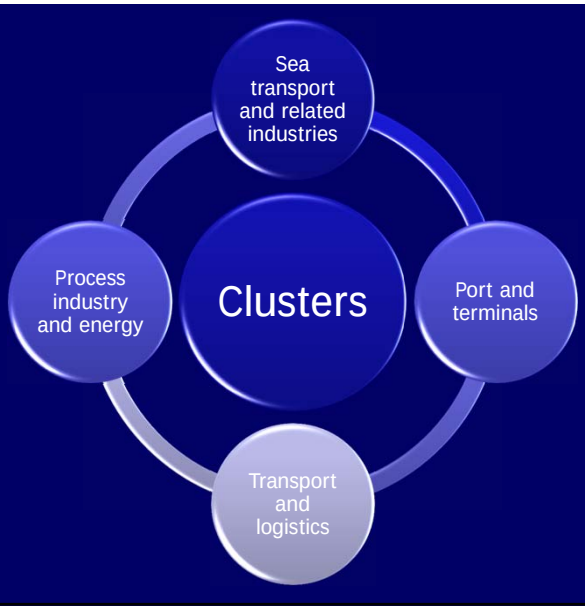

Clusters

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1. Sea transport and related industries

Sea shipping (Deck Officer, Marine Engineering Officer and all STCW'95 related courses), cruise, offshore, dredging, hydrography, sea fisheries.

2. Port and terminals

Port management, marine services (VTS, pilots), containers, dry, liquid and neo bulk handling and storage, all related terminal equipment.

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Clusters

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3. Transport and logistics

Inland waterway transport, road transport, rail transport, air transport, pipeline transport, ship's agent, forwarding agent, loading, discharge and warehousing, customs (organisation), security, safety and dangerous goods.

4. Process industry and energy

Process operation and industrial maintenance including refineries and power plant

Locations in the Netherlands

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North-South	:	275 km
East-West	:	150 km
Coastline	:	450 km
Land	:	33,893 km²
Water	:	7,650 km²
People	:	17 mln
Hinterland	:	350 mln

Offices and projects worldwide

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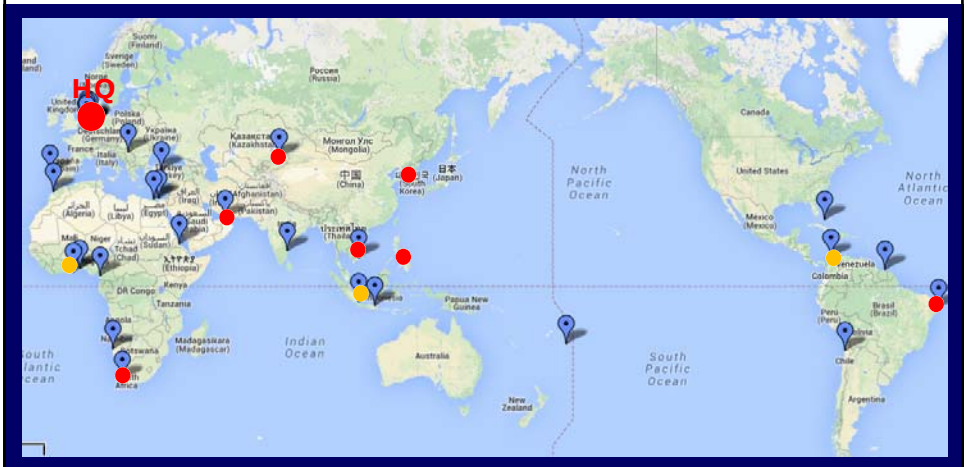

- Brazil, Kazakhstan, Korea, Philippines, South-Africa, Sultanate of Oman, The Netherlands (11), Vietnam (4)
- Colombia, Indonesia, West Africa

Prepared for the future

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Ho Chi Minh City
(Vietnam, 2011)

Sohar (Oman, 2011)

Rotterdam (NL, 2005)

Rotterdam (NL, 2012)

Brielle (NL, 2011)

Performance data

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- No of employees : 650
- No of students : 8,000
- No of certificates issued annually : 12,000
- Average annual turnover : EUR 80 million
- Accredited by : ISO 9001:2008

ISO 9001 DNV REGISTERED

The Nautical Institute · NOGEPA · OPITO · NIBHV · IMCA · IAPH · KVNR Royal Association of Netherlands Shipowners · VNSI · CEDA Central Dredging Association · iRO

Contact details

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STC is the authority on education, training, technical assistance and research for the maritime and transport (related) industries

Port of Rotterdam

Port Vision 2030 - highlights

Port Vision 2030
Contribution international competitive position

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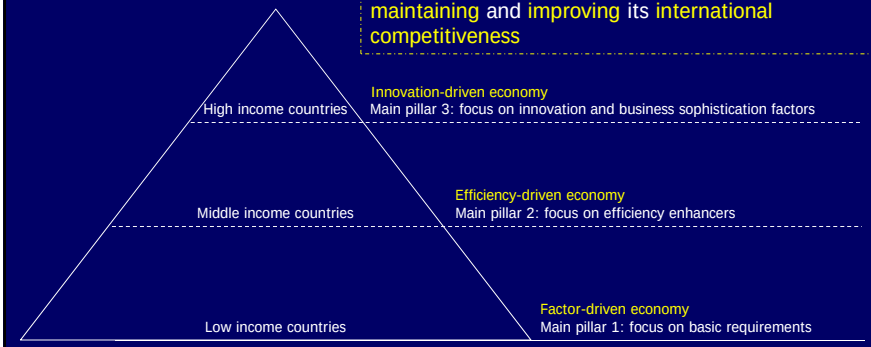
Definition international competitiveness = external benchmark for the strategic added value

Pillar 3 - the Netherlands: innovation, advanced business networks, and management organisations have to be the *most important source* for maintaining and improving its international competitiveness



Port Vision 2030
Strategic value port of Rotterdam

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Porter's Diamond Model: Determinants of the international competitiveness of industries

Port Vision 2030

1. Factor conditions

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Production factors
- Natural resources
- Human resources (size and quality of the workforce)
- Capital resources

Infrastructure in the broadest sense of the word
- Physical
- Administrative
- Information
- Scientific/ knowledge institutes

Specialised factor conditions
- Clusters of maritime activities
- Highly specialised employees
- Advanced possibilities combining transport modes

Port Vision 2030

2. Demand conditions

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How customer demand of the port contributes to an increasing, international competitiveness

- Leader firms stimulating/ pressuring companies to innovate and increase productivity in order to meet their demands
- Examples: terminal operators (APM, Vopak), and petrochemical giants (BP, Shell, Exxon, Texaco)

Enabling to employ accumulated knowledge internationally through export

Demand for highly specialised market segments; Smit, SBM Offshore

Port Vision 2030

3. Related and supporting industries

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Refers to the contribution of (mainly) suppliers to the international competitiveness

Suppliers in the port of Rotterdam with presence in multiple countries are usually internationally competitive

Examples: ABB, GTI, IMTECH, Wärtsila

Leader firms encourage increase quality and performance

Suppliers delivering to lead users lead the way

Port Vision 2030

4. Context for firm strategy, structure and rivalry

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Aspects

- How companies form strategies and deal with external stakeholders
- Intensity of competition (rivalry) in the port

'Ambidextrous companies' focus on both:

- Exploitation and
- Exploration (innovation); deliberately involved in development new knowledge about organising, producing and marketing, aimed at successful launch of new products and services

Port and industrial complexes with ambidextrous organisations are efficient, flexible and innovative operating in a highly competitive environment

Port Vision 2030

Strategic value port complex

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Competitive advantage contribution to the Dutch economy

- Strategic connectivity enables fast and easy access to foreign markets, resulting in im- and export promotion, positively affecting companies and consumers
- Internationally operating companies demanding high-quality and standards from suppliers and service providers, leading to innovations
- Stimulating effect on Rotterdam as place of business of group headquarters stimulating international competitiveness

Port Vision 2030

Improving strategic value

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- Focus on innovation and efficiency
- Competition in the port area improving performance and encouraging innovation
- Innovations require network relations between public sector, private sector and knowledge institutes
- Strengthening port competitiveness through strategic connectivity with:
  - Logistics hinterland connections
  - Other EU seaports
  - Other ports in the world

Port Vision 2030
Value added and employment (2011)

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- Direct value EUR 15.5 billion
- Indirect value EUR 6.7
- Share GDP 3.3%

- Direct employment 90,000
- Indirect employment 55,000

- Private sector investment EUR 1.5 billion per annum

Port Vision 2030
Trends

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- Trend and development analysis
- Forecasting, based on scenarios including
  - Future spatial need
  - Physical access bottlenecks
  - Needed environment
  - Demand for skilled labour

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Trends

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Factors

1. Increasing globalisation leading to increasing global transport of goods

2. Growing mismatch supply and demand for fossil fuels, ores, water, food and minerals leading to price increases, hikes and spikes, shortages and export restrictions ... geo-politics

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Trends

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Factors

3. Development labour market and knowledge economy
   - Demand for competent people exceeds supply
   - Competition for competent workforce increases leading to an international labour market
   - Dutch economy will be hampered to compete on cost of production and labour
   - Investing and stimulation for a future in the port become key
   - Transparency and reliability are key

Port Vision 2030
Trends

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Factors

4. Scaling up in transport
5. Integration logistic chains
6. Climate change and sustainability
7. ICT
8. Changing EU energy and fuel mix

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Prognoses

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Cargo flow

- Bulk - wet
- Bulk – dry
- Containers and break bulk
  - Container sector fastest growing sector
  - Transhipment of coal strong growth due to increased energy production
  - Growth markets: LNG, mineral oil products, biomass, steel
  - Shift transhipment from raw materials to semi-manufactured and end-products

Port Vision 2030
Vision on port and industry

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- Global Hub concept describing the vision of the logistics in the port
- Europe's Industrial Cluster is the vision for the industry

Key words
- Efficiency and sustainability
- Connection with NW EU industrial and logistics hubs
- Cooperation public sector, private sector and knowledge institutes
- High-quality labour market and environment, accessibility
- Cornerstone regional/ EU prosperity
- Invest in economy and quality of life

Port Vision 2030
Global Hub

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Characteristics

- Global and intra-European cargo flow
- Chain efficiency
- Sustainable hub
- Integrated port network
- High-quality port related activities in the region

Port Vision 2030
Europe's Industrial Cluster

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Characteristics

- Integration between companies
- Links between complexes in the region
- Diversification and preservation of energy production
- Production of clean fuels
- High-quality supporting activities in the region
- Growth of the bio-based chemistry

Port Vision 2030
Investments

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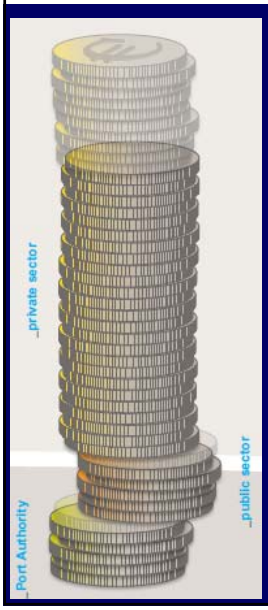

- Private sector invests the most
- Government invests in infrastructure, innovation and preservation by using subsidies and incentives
- Port and industry match 5 of 10 top sectors defined by the Government: energy, logistics, chemistry, water and headquarters
- Municipality invests in attractive living environment and education

Port Vision 2030

Determining the course

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1. **Investment climate**
2. City and region
3. Europe
4. Port area
5. **Accessibility**
6. **Shipping**
7. Environment and safety
8. **Innovation**
9. Rules and regulation
10. **Employment**

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Port Vision 2030

Determining the course

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1. Investment climate

Port Vision 2030

Determining the course

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1. Investment climate

- Delivering value for money with the Rotterdam 'port product'
- Strengthening partnerships between governmental authorities, businesses and the Port Authority
- Strengthening partnerships between inspection agencies and supervisory renewal
- Favourable fiscal climate and active joint acquisition
- Improving effectiveness and speeding up decision making and procedures
- Swift and predictable dispute resolution
- A client-oriented, flexible, reliable and result-oriented Port Authority

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Determining the course

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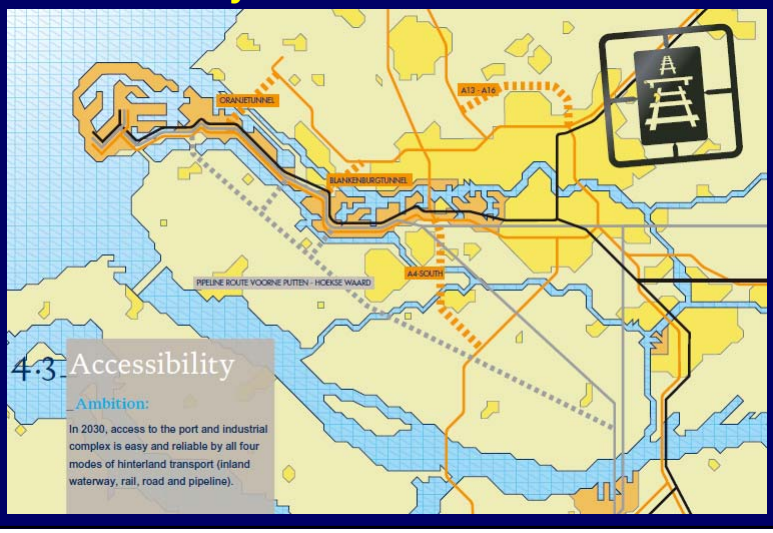
5. Accessibility



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Determining the course

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5. Accessibility

1. Improving efficiency through alignment and controlling bodies
2. Strengthening the hinterland network
3. Realising a modal shift
4. Passenger transport
5. Reliable and robust infrastructural network
   - In and around the port
   - To the hinterland

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Determining the course

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6. Shipping

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Determining the course

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6. Shipping

1. Improving efficiency service sea-going and inland navigation vessels, leading to
   - Less cost for ship owners; slow steaming and on-time arrival at the terminal
   - Reduction CO_2 emission, fine dust and other toxic gasses
   - Cost advantages for other nautical service providers like pilots, tugboats and linesmen
   - Cost advantages for terminals; terminal optimisation
2. Safety

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Determining the course

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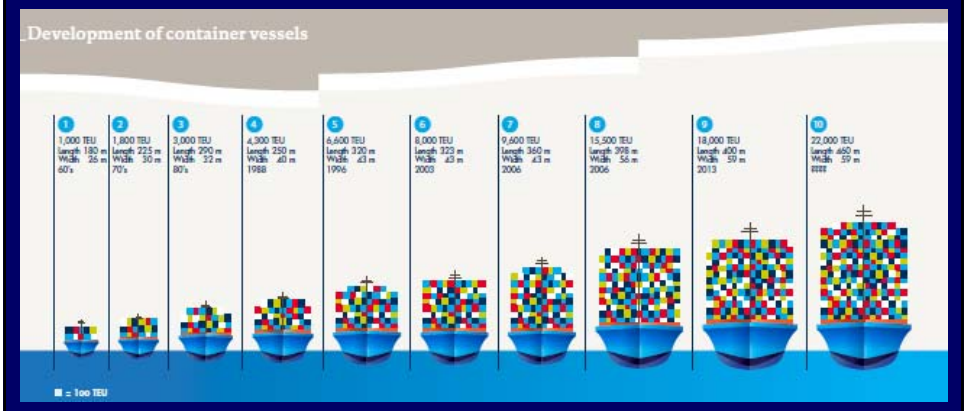
6. Shipping



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Determining the course

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8. Innovation

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Determining the course

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8. Innovation – top 8 priorities

1. Transition to bio-based industries/ green chemicals
2. Increasing space productivity
3. Increasing energy efficiency in industrial processes
4. Smart traffic and mobility management for road, rail and inland waterways
5. Optimising and further digitising the supply chain
6. Increasing sustainability of all modes of transport
7. Carbon capture, transport and reuse
8. Sufficient supply of qualified young people to fill jobs in the port

Port Vision 2030

Determining the course

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10. Employment

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Port Vision 2030

Determining the course

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10. Employment

1. Increasing the number of technical and logistics graduates
2. Getting youngsters interested
3. Up-to-date HR policy
4. Strengthening facilities in the port

Thank you

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Maritime by Holland.

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Dutch Maritime Cluster

in brief

Dutch Maritime Cluster
Cluster definition

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Clusters are **networks** of production of **inter-dependent firms**, **linked** in a value adding chain

Dutch Maritime Cluster
Cluster structure

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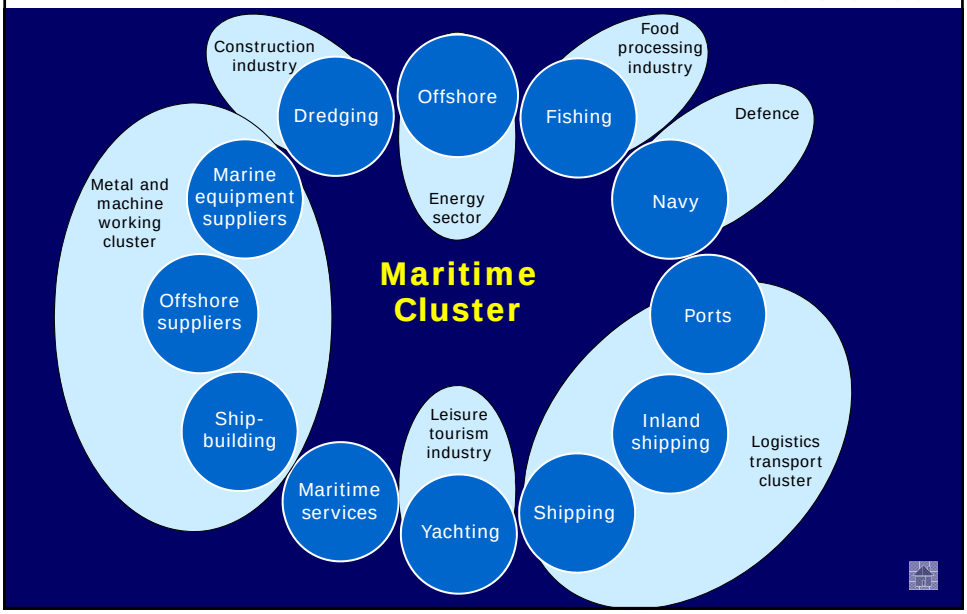

Dutch Maritime Cluster
Cluster policies

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Policies should:

- Create the conditions within which the private sector could function best
- Reinforce innovative capabilities and capacity to create sustainable value added and employment for the economy

Need:

- Competent people (human capital)
- Innovation driven R&D
- Sufficient (access to) capital

Dutch Maritime Cluster
Cluster policies' focus areas

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Outside span of control of the Dutch Maritime Network

- Home market
- Infrastructure and spatial planning
- Modal shift
- Level playing field
- Capital market
- Dialogue government-private sector

Dutch Maritime Cluster
Cluster policies' focus areas

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Within span of control of the Dutch Maritime Network

- Network and image building
- Innovation
- Export
- Labour market and education

Dutch Maritime Cluster
Economic structure and significance

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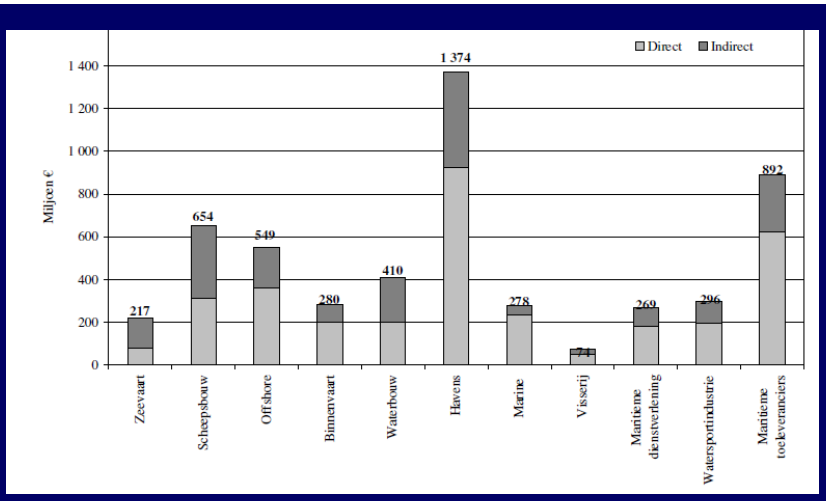
- Direct and indirect production
- Value added
- Employment

Dutch Maritime Cluster
Figures - financial impact



Total backflow maritime cluster 2011: EUR 4.8 billion

Source: De Nederlandse Maritieme Cluster – Monitor 2012, Dutch Maritime Network, 2013

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Dutch Maritime Cluster
Key drivers

Level playing field and leader firms are the most important condition for the dynamics and growth of a Cluster and its long-term strength.

Dutch Maritime Cluster
Summary

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- Government and private sector work closely together
- Cluster definition and related policy are elementary
- Level playing field and innovation are crucial
- Preferably every sector should have one or more leader firms
- Maritime cluster can strongly contribute to economic development
- Clusters generate backflow

Thank you

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